epiTRENDS

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Study Explores Differences in Rural and Urban Areas in Diabetes Management and Hospitalizations

The dramatic increase in prevalence of diabetes in the United States in the past decade has prompted the Centers for Disease Control and Prevention to characterize the problem as an epidemic. In Washington State, the rising prevalence among adults has paralleled the national trend, with a rate increase from 3.1% (± 0.6%) in 1995 to over 5.8% (± 0.8%) in 2002. This trend will continue, fueled by risk factors for the onset of diabetes such as the concurrent rise in adult obesity and the aging population.

As the population of people with diabetes continues to grow, management of the disease will be of paramount importance. The "progression" of diabetes due to poor disease management leads to long-term complications that might eventually require hospitalizations. Furthermore, death among people with diabetes usually occurs as a result of these complications.

County level surveillance data summaries compiled in 1999 revealed that diabetes hospitalization rates were higher in certain rural as compared to urban counties. This finding prompted the Washington Diabetes Prevention and Control Program to examine further the hospitalization experience, measures for disease management, and mortality among people with diabetes in urban versus rural areas.

Study Scope

DOH diabetes program staff obtained information on the prevalence of diabetes management indicators (hemoglobin A1c checks, eye and foot exams, and diabetes education) from the Behavioral Risk Factor

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Mom Is Right: Respiratory "Etiquette" Helps Prevent the Transmission of Cold and Flu Viruses

As winter arrives, respiratory infections such as colds and influenza usually increase in frequency. Several strategies can reduce their transmission, and should be practiced by health care workers and others who could expose vulnerable populations.

Influenza (flu) can affect up to a third of the population annually. In Washington, flu season usually peaks from January through March. For many people, flu causes time lost from work, school, or other activities. Influenza affects all age groups, but young children and the elderly are most at risk for serious disease. About 36,000 flu-related deaths occur in the United States each year.

Pertussis has increased in Washington in 2003. It affects all age groups, is most common among children, and most serious among infants. The cough of pertussis lasts for weeks, and children and adults with untreated mild infection may expose others.

Most respiratory viruses, such as colds, don't cause serious infection or significant lost work time. However, some respiratory infections, e.g., influenza, RSV (respiratory syncytial virus), pertussis, and SARS-CoV (the causative agent of severe acute respiratory syndrome) may cause life-threatening illness, especially in vulnerable populations.

Respiratory Etiquette

What these infections have in common is spread by respiratory droplets — the infectious agents are present in droplets

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Diabetes *(from page 1)*

Surveillance System (BRFSS 2000–2002). Data on diabetes-related hospitalization rates, including those associated with coronary heart disease (CHD), stroke and lower extremity amputations (LEA), and rehospitalizations, came from the Comprehensive Hospital Abstract Reporting System (CHARS 1999–2001). Vital Statistics death files from years 1999–2001 provided data on mortality (diabetes-related primary and underlying cause).

We calculated crude and age-adjusted rates per 1000 total population. We categorized age into four groups as per CDC recommendations: 0–44 years, 45–64, 65–74, and 75+.

Study Findings

Diabetes prevalence among adults in Washington seems higher in rural settings (7.2% ± 1.7) as compared to urban settings (5.2% ± 0.5). However, these differences are not significant, even after controlling for age. Furthermore, initial findings from BRFSS indicated no difference in prevalence of diabetes management indicators between urban and rural areas.

Review of crude hospitalization rates by urban and rural setting revealed sizeable, significant differences in all categories (Table 1). After data were adjusted for age, rate differences disappeared among hospitalizations related to stroke and LEAs. Differences still persisted among total hospitalization rates, CHD-related hospitalization rates, and rehospitalization rates.

Crude overall mortality rates varied between rural and urban settings, 63.8 (± 1.2) and 92.1 (± 4.1) respectively. However, age-adjusted rates were no different in rural (66.3 ± 1.3) versus urban (69.1 ± 1.7) areas.

Findings from these initial analyses suggest that the dramatic differences in hospitalization and mortality rates between urban and rural settings can be mostly explained by the differences in age distribution in each area. The residual significant differences in age-adjusted total hospitalizations, CHD-related hospitalizations, and rehospitalizations merit further investigation.

For More Information

Contact Mike Boysun, Washington Diabetes Prevention and Control Program, 360-236-3671, or mike.boysun@doh.wa.gov. The program web site is www.doh.wa.gov/cfh/diabetes.

TABLE 1: Crude and age-adjusted rates of diabetes-related hospitalizations by urban versus rural residency per 1000 total population

	Urban		Rural	
Crude Rates	Rate	95% CI	Rate	95% CI
Total hospitalizations	969	(964, 973)	1417	(1399, 1435)
CHD	215	(212, 217)	381	(372, 390)
Stroke	69.1	(67.8, 70.4)	95.0	(90.4, 99.6)
LEA	18.7	(18.0, 19.4)	24.6	(22.3, 26.9)
Rehospitalization	469	(466, 472)	742	(729, 754)
Age-adjusted Rates	Urban		Rural	
	Rate	95% CI	Rate	95% CI
Total hospitalizations	998	(993, 1003)	1125	(1111, 1139)
CHD	222	(220, 224)	290	(283, 297)
Stroke	71.7	(70.4, 73.1)	71.3	(67.8, 74.7)
LEA	19.2	(18.5, 19.9)	19.7	(17.8, 21.6)
Rehospitalization	483	(480, 487)	587	(576, 597)

Is the Screening Capacity for Colorectal Cancer Adequate in Washington?

More than 1000 Washingtonians died from colorectal cancer in 2001. Colorectal cancer screening for average risk people age 50 and older reduces risk of dying from this cancer. Nonetheless, only about 50% of Washington residents met the American Cancer Society guidelines for screening in 2002, including having had a fecal occult blood test in the past year and/or a sigmoidoscopy in the last five years. Some health care providers have expressed concern that the capacity to screen all eligible adults may be inadequate.

Early next year, the Centers for Disease Control and Prevention (CDC) and the Washington State Department of Health will assess the current capacity of the state's health care system to provide endoscopic colorectal cancer screening and follow-up examinations to all appropriate persons. The results of the survey of health care providers known to own endoscopes will be used to identify possible deficits in the current medical infrastructure, and to provide information for planning state initiatives aimed at increasing colorectal cancer screening. DOH encourages health care providers to participate in the survey if contacted.

For more information, please contact Dr. Juliet VanEenwyk at 360-236-4250 or juliet.vaneenwyk@doh.wa.gov.

Monthly Surveillance Data by County

October 2003* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead§#
Adams	0	0	0	0	0	0	0	1	0	6	0	0	0	0/17
Asotin	0	0	0	0	0	0	1	0	0	8	0	0	0	0/0
Benton	0	1	1	0	0	0	0	4	0	20	3	1	0	0/22
Chelan	0	0	0	0	0	0	0	0	0	18	0	0	0	1/39
Clallam	0	0	0	0	0	0	0	0	0	17	2	1	0	0/0
Clark	1	1	1	0	0	0	0	1	1	83	12	1	1	0/22
Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Cowlitz	0	0	0	0	1	0	0	0	0	32	5	0	0	0/23
Douglas	0	2	0	0	0	0	0	0	0	9	1	0	1	0/0
Ferry	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Franklin	0	1	0	0	0	0	0	2	0	16	0	0	1	0/#
Garfield	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Grant	0	0	0	2	0	0	0	0	1	32	1	1	0	2/69
Grays Harbor	1	3	0	1	0	0	0	0	0	17	0	0	0	0/0
Island	0	0	0	0	0	0	0	2	0	14	0	0	0	0/#
Jefferson	0	0	0	0	0	0	0	0	0	5	0	0	1	0/#
King	9	30	5	5	1	0	0	54	10	538	136	39	1	0/87
Kitsap	0	3	0	0	0	0	0	1	0	55	8	0	0	2/6
Kittitas	0	0	0	0	0	0	0	0	0	18	4	0	0	0/0
Klickitat	0	1	0	0	0	0	0	0	0	4	1	0	0	0/0
Lewis	0	0	0	0	0	0	0	1	1	12	0	0	0	0/6
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Mason	0	1	0	0	0	0	0	0	0	21	0	0	0	0/0
Okanogan	0	0	0	0	0	0	0	0	0	7	0	0	0	1/16
Pacific	1	1	0	0	0	0	0	0	0	2	0	0	0	0/0
Pend Oreille	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Pierce	1	10	1	3	0	0	1	13	4	299	43	2	1	4/61
San Juan	0	0	0	0	0	0	0	0	0	1	1	0	0	0/0
Skagit	1	1	0	0	1	0	1	0	1	20	1	0	0	0/#
Skamania	0	0	0	0	0	0	0	0	0	3	0	0	0	0/0
Snohomish	1	7	3	0	0	0	0	20	0	138	8	4	0	2/16
Spokane	0	0	0	0	0	0	0	0	0	102	6	1	3	0/19
Stevens	0	1	0	0	0	0	0	0	0	7	3	0	0	0/0
Thurston	2	2	0	0	1	0	0	0	0	52	4	0	0	0/#
Wahkiakum	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Walla Walla	0	0	0	0	0	0	0	0	0	1	0	0	0	4/55
Whatcom	0	7	3	1	1	0	0	6	0	37	8	1	0	0/16
Whitman	0	0	0	0	1	0	0	0	0	28	1	0	0	0/0
Yakima	2	3	2	0	0	0	0	8	1	90	11	0	1	0/16
Unknown														0/0
Current Month	19	75	16	12	6	0	3	113	19	1713	259	51	10	16/503
October 2002	20	74	24	7	4	4	6	27	20	1532	273	36	22	8/536
2003 to date	98	495	147	57	65	17	29	648	207	13980	2319	374	268	145/5944
2002 to date	132	456	141	141	60	21	57	391	202	12407	2430	405	258	146/6481

* Data are provisional based on reports received as of October 31, unless otherwise noted.
† Unconfirmed reports of illness associated with pesticide exposure.
§# Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.

WWW Access Tips

Information on flu is available at www.cdc.gov/nip/flu/default.htm and at www.doh.wa.gov/cfh/Immunize/flu_updates.htm. Information on pertussis is available at: www.doh.wa.gov/topics/pertussis.htm

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http://www.doh.wa.gov/Publicat/EpiTrends/03_EpiTrends/2003_trend.htm

Respiratory Etiquette *(from page 1)*

coughed or sneezed into the air, or can remain alive on surfaces such as door handles touched with hands contaminated by respiratory discharges. Just as your mother told you, follow basic hygiene rules to keep from catching or transmitting respiratory infections.

The Centers for Disease Control and Prevention (CDC) is promoting "respiratory etiquette" to decrease the transmission of these infections. People with respiratory symptoms should cover their nose and mouth with a tissue when coughing or sneezing, wash their hands whenever they are contaminated with respiratory secretions, and use face masks when provided by a health care facility.

Health care facilities can screen patients and visitors entering a facility and provide hand hygiene products, tissues, and masks in waiting areas, along with instructions on respiratory etiquette. In some situations, patients with respiratory infections may be placed in a separate waiting area and visitors with symptoms may be excluded from a health care facility.

Vaccination

The Washington State Department of Health (DOH) and the Centers for Disease Control and Prevention (CDC) recommend influenza vaccination beginning in October for persons at risk for influenza-related complications. This year, public health agencies also strongly encourage vaccination for healthy children, ages 6 to 23 months. DOH urges influenza vaccination *now* for those who wish to avoid flu, but especially for people at risk for severe infections, including:

- Those aged 65 years or older;
- Residents of nursing homes and other long–term care facilities;
- Adults and children with chronic pulmonary or cardiac disease;
- Adults and children who have chronic metabolic diseases (including diabetes), renal dysfunction, hemoglobinopathies, or immunosuppression;
- Children and adolescents (6 months to 18 years) who receive aspirin therapy and might be at risk for Reye syndrome after influenza infection;
- Women who will be in the second or third trimester of pregnancy during the flu season, and;
- Health-care providers, and household members of people in the above risk groups.

Annual flu shots are important because flu viruses change constantly. Except for children under 9 years of age who are receiving flu vaccine for the *first time* and require two doses, most people need a single annual dose of flu vaccine.

Pertussis vaccine is a recommended, routine immunization for children up to 7 years of age, but immunity wanes, and most adults are susceptible to pertussis. Because there is no vaccine approved for older children and adults, quick recognition and reporting of pertussis by providers, with treatment of those infected and their contacts, will help reduce disease transmission.

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